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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/820,108	04/08/2004	Mihrimah Ozkan	034044.030 (2003-368-2)	8315

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EXAMINER

YU, MELANIE J

ART UNIT	PAPER NUMBER
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1641

DATE MAILED: 03/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/820,108

Applicant(s)

OZKAN ET AL.

Examiner

Melanie Yu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 22-36 is/are pending in the application.
- 4a) Of the above claim(s) 22-24 and 26-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14, 25 and 31-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of group I, claims 1-14 and 25 in the reply filed on February 7, 2005 is acknowledged. Newly added claims 31-36 will be examined with the claims of group I.

Status of the Claims

2. Applicant's amendment filed February 7, 2005 has been entered. Claims 15-21 have been canceled. Claims 22-30 have been withdrawn. Claims 31-36 are newly added. Claims 1-14 and 22-36 are currently pending in this application.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-14, 25 and 31-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the term "over" is vague because it is unclear whether the single reactant component is immobilized directly to the single electrode.

Claim 14 is vague and indefinite because it is unclear if the plurality of single reactant components is immobilized over the electrode of claim 1 or if a plurality of single reactant components is present, but not immobilized.

Claim 25 is vague and indefinite because it is unclear whether the single reactant component is the same as that of claim 1 or whether the biosensor comprises only the single electrode of claim 1.

With respect to claim 32, the phrase “the same as or different from” is vague because it is unclear whether the second single reactant component is the same species as the single reactant component or whether the second single reactant component is the same component as the single reactant component.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-6, 8, 12, 25, 31 and 32 are rejected under 35 U.S.C. 102(e) as being anticipated by Hashimoto (US 6,670,131).

Regarding claims 1-4, Hashimoto teaches a single reactant component immobilized over a single electrode (col. 12, lines 39-62) wherein the component is a biomolecule being a nucleic acid (a nucleic acid can also be a ligand, col. 4, lines 31-37, col. 6, lines 59-64).

With respect to claims 5 and 6, Hashimoto teaches a bacterium of *E. coli* immobilized over a single electrode (*E. coli* is indirectly immobilized on the electrode by binding to the nucleic acid; col. 16, lines 7-17).

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With respect to claim 8, Hashimoto teaches a single electrode comprising gold (col. 5, lines 23-32).

Regarding claims 12-14, Hashimoto teaches the single electrode immobilized on a substrate made of glass (col. 5, lines 33-38). Hashimoto further teaches a plurality of the single reactant component (a plurality of nucleic acid immobilized electrodes means there is a plurality of the single reactant component, col. 5, lines 13-20).

With respect to claim 25 Hashimoto teaches a single reactant component immobilized over a single electrode (col. 12, lines 39-62).

Regarding claims 31 and 32, Hashimoto teaches a second single reactant component immobilized over a second single electrode (plurality of nucleic acid electrodes so that subject substances may be simultaneous measured means there is a second nucleic acid on a second electrode, col. 5, lines 13-20), wherein the second single reactant component is different from the single reactant component (different nucleic acids are required to detect many kinds of genes of many samples; col. 2, lines 45-50; col. 15, line 61-col. 16, line 23).

5. Claims 1, 9-11, 25, and 33-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Wohlstadter et al. (US 2001/0021534).

Wohlstadter et al. teach a single reactant component immobilized over a single electrode (plurality of binding domains present on an electrode, par. 0107), wherein the single electrode has a diameter of between 1 μm to 10 mm (par. 0222), which encompasses the recited diameter ranges of about 60 μm to about 80 μm , about 40 μm to about 60 μm , and about 20 μm to about 40 μm .

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Regarding claims 25 and 33-35, Wohlstadter et al. teach a single reactant immobilized over an electrode (par. 0107). Wohlstadter et al. further teach a plurality of single reactant components immobilized over a single electrode (plurality of binding domains immobilized on an electrode, par. 0107; wherein the binding domains are specific for binding a particular analyte, par. 0124), a substrate upon which the single electrode is immobilized (support, par. 0023; par. 0130), wherein the substrate comprises glass (par. 0130).

With respect to 36, Hashimoto teaches the biosensor further comprising a filter (par. 0026) and a measurement system (par. 0114).

6. Claims 1, 2 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Giglio et al. (Synthesis, analytical characterization, and osteoblast adhesion properties on RGD-grafted polypyrrole coatings on titanium substrates, 2000, J. Biomater. Sci. Polymer Edition, Vol. 11, No. 10, pages 1073-1083).

Giglio et al. teach a single reactant component, being an osteoblast, immobilized over a single electrode (Ppy film is grown on Ti electrode which immobilizes the osteoblast on the electrode, pg. 1075, section 2.2 Apparatus, first paragraph; pg. 1075, section 2.3, first sentence; pg. 1080, last 2 paragraphs).

Conclusion

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie Yu whose telephone number is (571) 272-2933. The examiner can normally be reached on M-F 8:30-5.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on (571) 272-0823. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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Art Unit 1641



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03/17/05